# Divar - Digital Versatile Recorder





Security Systems

EN | Operation Manual

BOSCH

## IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions - All the safety, operating and installation instructions should be read before the unit is operated.

2. Keep these instructions - The safety, operating and installation instructions should be retained for future reference.

3. Heed all warnings - All warnings on the unit and in the operating instructions should be adhered to.

4. Follow all instructions - All operating and use instructions should be followed.

5. Do not use this apparatus near water - for example, in an unprotected outdoor installation; or any area which is classified as a wet location.

6. Clean only with a dry cloth - Unplug the unit from the outlet before cleaning. Do not use liquid cleaners or aerosol cleaners.

7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider that the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or third prong are provided for your safety. If the provided plug does not fit into the outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Only use attachments/accessories specified by the manufacturer.

12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.



13. Unplug this unit during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moistue, does not operate normally, or has been dropped.

### CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

### FCC & ICES INFORMATION

(U.S.A. and Canadian Models Only)

This is a Class B product. This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undisired operation.

English

# Divar

## Digital Versatile Recorder

## Operation manual

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English

## SAFETY PRECAUTIONS

**CAUTION**
RISK OF ELECTRIC SHOCK. DO NOT OPEN!

**CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT OPEN COVERS. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**

This label may appear on the bottom of the unit due to space limitations.

The lightning flash with an arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING**
**TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE AND OBJECTS WITH LIQUIDS, SUCH AS VASES, SHOULD NOT BE PLACED ON THIS APPARATUS.**

Attention: Installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.

Power Disconnect. Units have power supplied whenever the power cord is inserted into the power source. The power cord is the main power disconnect for all units.

The socket outlet shall be installed near the equipment and shall be easily accessible.

The DVD writer is a laser product. The following classification label is located on the drive.

CLASS 1 LASER PRODUCT
CAUTION:
INVISIBLE LASER RADIATION WHEN OPEN.
AVOID EXPOSURE TO BEAM.

# Reference

## Definition of terms

Cameo: Single camera picture in a multiscreen display.
Dwell time: The length of time that an alarm indicator continues to operate after the action causing it has occurred. The length of time that one image of a sequence is shown.
Full-screen: A display that only shows one picture occupying a full screen.
Multiscreen: The division of a display screen so that it shows a certain number of cameras at the same time.
Sequence: Camera pictures shown one after the other in time either in full-screen or quad modes.
Quad: Four camera pictures shown on one display screen.

## Icons shown on the screen

| | | |
|---|---|---|
| Play forward | Pause | Alarm |
| Play reverse | Freeze | Motion |
| Fast forward | Zoom | Network |
| Fast reverse | Sequence | Error |

# Introduction

## Digital versatile recorder for security applications

The Divar is a video recording system that can record multiple camera signals while simultaneously providing live multiscreen viewing and playback. It combines the functionality of a digital recorder with a multiplexer and a switcher.

The unit has comprehensive search (including a smart motion search) and playback facilities for viewing stored video. Once set up, all recording takes place in the background without requiring operator intervention. Maximum recording rates of 60 (NTSC) and 50 (PAL) images per second in total are guaranteed with unsynchronized cameras. The recording rate and quality are selectable per camera.

All models have extensive alarm handling functions and telemetry control. Alarm functions include motion detection in user-definable areas of the image on any camera input.

The unit can be easily operated and programmed via the front panel control keys and on-screen display menu system. One monitor output provides full-screen, quad and multiscreen viewing; another spot/alarm monitoring. A keyboard can be connected for PTZ control and to improve the ease-of-use.

Via a network, the Control Center PC-application can be used for live viewing, playback and configuration. Six simultaneous users can control multiple Divars. The Divar includes an authenticity check for both local and remote playback. A dedicated PC player is provided for playback of secure video files. Additionally, a web browser on a PC can be used to view live images or playback recordings from a Divar.

ATM/POS transaction data can be recorded and viewed if the Divar is connected to an ATM or POS device via an ATM/POS bridge unit and has a license installed.

## Versions

There are various Divar models; 6-channel, 9-channel and 16-channel, each with various storage capacities. In addition, a Divar can have one or both of the following:

- An internal DVD writer
- Bilinx-enabled camera inputs

A Divar with an internal DVD writer allows you to make archives locally without the need for a PC. The writer supports DVD+RW, DVD+R, CD-R and CD-RW media.

A Divar Bilinx supports the use of Bilinx cameras. Bilinx technology embeds control commands in the video signal enabling direct camera access and control through a single video coaxial cable.

This manual describes the 16-channel version with an internal DVD writer and Bilinx-enabled camera inputs.

Both 6-channel and 9-channel versions operate in exactly the same way except that fewer cameras can be connected, there are fewer camera keys and the number of multiscreen views is reduced. Instructions that only apply to the internal DVD writer or Bilinx functionality are indicated by a double (**) or triple (***) asterix respectively. If your unit has neither of these facilities, then please skip these instructions.

## Setup

The unit is configured by an administrator. Access to the configuration functions is normally password protected. The choices made during setup can restrict the functions available to the operator. For example, the number of multiscreen views can be limited.

Search and playback functions can also be password protected, so it is possible that they are not available to the operator. All possible operator facilities are described in this manual but some of these may not be available to you.

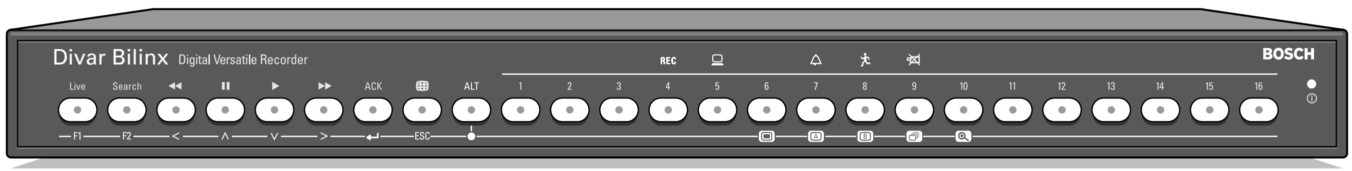
## On-screen help

On-screen help is available for all topics. Just press the yellow ALT key ALT for at least one second to see the help text associated with your current activity.

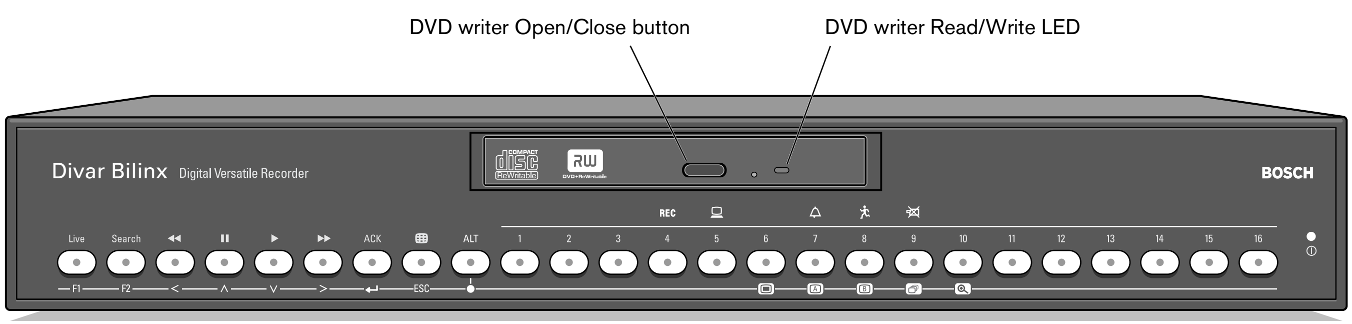
Press the escape key ESC to exit help.

# Front panel controls

## Divar Bilinx




## Divar Bilinx with internal DVD writer



## Indicators

The power indicator lights to indicate that power is being supplied to the unit.

The indicators across the top of the controls light or flash to alert you to various operating conditions.

| | | | |
|---|---|---|---|
| REC | Record | - | lights when the unit is recording video. |
| | Network | - | lights when a remote user is connected to the unit. |
| | Alarm | - | flashes when an alarm is detected. |
| | Motion | - | flashes when motion is detected in a camera signal. |
| | Video loss | - | flashes when a video loss condition is detected for a camera input. |

## Keys

The keys on the front panel can be used for controlling primary functions or alternate functions. Symbols for the primary functions are shown above the keys. Symbols for the alternate functions are shown below the keys.

The alternate functions are activated by first pressing the ALT key ALT and then the desired key. When the alternate function mode is active, the light below the ALT key is lit.

The unit automatically exits the alternate mode if the monitor A key, monitor B key or sequence key is pressed. When in a menu, the keys operate according to their alternate function.

## Primary functions

(light below ALT key off)

| | | | |
|---|---|---|---|
| Live | Live key | - | press to switch to live viewing. |
| Search | Search key | - | press to open a search menu to look for recorded events. |
| ◀◀ | Rewind key | - | in live mode, press to start reverse playback of recordings for the displayed cameras. |
| | | - | in playback mode, press to speed up rewind. |
| | | - | in pause mode, press to step back one frame. |
| ❚❚ | Pause key | - | in live mode, press to freeze a camera picture. |
| | | - | in the playback mode, press to freeze playback picture; press for longer than one second to protect recordings or archive them to a DVD or CD. |
| ▶ | Play key | - | in live mode, press to resume playback from the last selected playback position. |
| | | - | in pause mode, press to resume playback. |
| ▶▶ | Fast forward | - | in live mode, press to start playback from one minute earlier. |
| | | - | in playback mode, press to speed up the playback rate. |
| | | - | in pause mode, press to step forward one frame. |
| ACK | ACK key | - | press to acknowledge an alarm. |
| ⊞ | Multiscreen key | - | press to see different monitor display layouts. |
| ALT | ALT key | - | switches the front panel keys between a normal function and an alternate function (shown below the key). |
| | | - | press for longer than one second to get on-screen help. |
| 1 - 16* | Camera keys | - | press to see a full-screen display of the camera's picture. |
| | | - | in the menu mode, press to select the camera or enter a number. |
| | | - | press current camera key to switch the display of ATM/POS data on and off. |

* can be 6, 9 or16

## Alternate functions

(light below ALT key is lit)

| | | | |
|---|---|---|---|
| F1 | F1 key | - | restores defaults in active menu. |
| F2 | F2 key | - | is assigned a specific function in the menu. |
| Arrow keys: | | - | move around through menu items or values. |
| < | | - | Left |
| ^ | | - | Up |
| v | | - | Down |
| > | | - | Right |
| ↵ | Select key | - | selects a submenu or menu item, or saves selections made in menus. |
| ESC | ESC key | - | press to return to previous level or to exit menu system without saving.<br>- press to leave help system. |

| | | |
|---|---|---|
| Menu key | - | opens the menu system. |
| Mon A key | - | assigns front panel keys to monitor A. |
| Mon B key | - | assigns front panel keys to monitor B. |
| Sequence key | - | view cameras in sequence on full-screen or quad displays. |
| Zoom key | - | zooms in on the active camera display (full-screen or active cameo). |

# Viewing pictures

The unit has two monitor outputs, A and B. The way in which these monitors display pictures depends on how the system has been set up.

## Monitor A

Monitor A is the main monitor. It shows full-screen, quad or multiscreen live or playback camera pictures. Status messages, alarms, motion, and video loss warnings are also displayed on this monitor. When the menu system is activated it is displayed on this monitor.

## Monitor B

Monitor B displays a single full-screen picture of a selected camera or a sequence of full-screen pictures. When an alarm or motion input is detected, the camera picture with the flashing Alarm/Motion indicator can be displayed on monitor B. When multiple alarms or motion occur, camera pictures are sequenced on monitor B.

## Selecting a monitor to control

To control the display on monitor A:

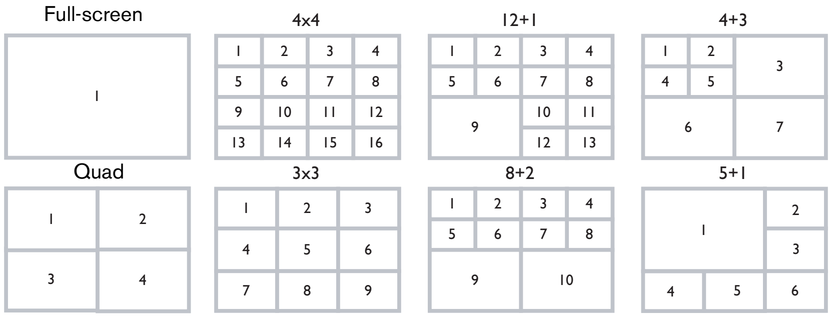
1. Check that the light on the front panel is lit.
2. If is not lit, press the ALT key and then press the monitor A key .

To control the display on monitor B:

1. Check that the light on the front panel is lit.
2. If is not lit, press the ALT key and then press the monitor B key .

## Viewing

The drawing shows all possible views for monitor A. Some multiscreen views may have been disabled during set-up. The number of connected cameras can also influence the multiscreen views available.




The quad mode can have 4 different quad screens that can be shown in sequence to display 16 camera pictures.

## Multiscreen

To view different multiscreen displays on monitor A:

1. Press the multiscreen key.
   > A multiscreen display of camera pictures appears on monitor A.
2. Press the multiscreen key again to go to the next programmed multiscreen view.
   > If you continue to press the multiscreen key, the unit cycles through all enabled multiscreen views.

## Full-screen

To view a full-screen shot of a camera:

1. Press a camera key.
   > A full-screen shot of the camera you selected appears.
   > The camera key of the selected camera lights (green).
2. Press the multiscreen key to go back to your previous multiscreen view on monitor A.

## Sequence

To view a sequence of live camera pictures of several cameras:

1. Press the ALT key ALT and then the sequence key.
   > The indicator lights.
   > A sequence of camera pictures appears, each for a pre-programmed amount of time.
2. Press the ALT key ALT and then the sequence key to stop sequencing.
   > Zooming, pressing the multiscreen key or selecting a single camera also stops sequencing.

## Cameo assignment

Assigning cameras to cameos in a multiscreen view:

1. Press the ALT key ALT and then the multiscreen key.
   > The multiscreen key indicator flashes.
   > The border around the active cameo is green.
   > The camera key of the camera shown in the active cameo lights (green).
2. Use the arrow keys if you wish to select a different cameo.
3. Press a camera key to display that camera's picture in the active cameo.
   > The camera is assigned and the following cameo becomes active.
4. Continue to press camera keys to assign camera pictures to cameos.
5. Press the ALT key ALT to interrupt cameo assignment and exit the assignment mode.
   > The assignment mode is automatically ended when all cameos have been assigned.

The cameo assignment that you make is used in playback mode as well as in live mode.

## Image freeze

Freezing a camera shot on monitor A:

1. Press the pause key to freeze the picture in the active cameo.
2. Press the pause key again to return to live viewing.

If you are viewing a camera picture in full-screen mode, then this picture is frozen. The zoom function can be used on a frozen picture. If you change viewing mode, any frozen pictures are released.

## Zoom

To zoom in on a camera picture:

1. Press the ALT key ALT.
   > The ALT indicator lights.
2. Press the zoom key.
   > The zoom indicator lights.
   > The picture is enlarged by a factor of 2.
3. Use the arrow keys to select the area of the picture to be displayed.
4. Press the zoom key again to zoom in further.
   > The picture is enlarged by a factor of 4.
5. Use the arrow keys to select the area of the picture you want to see.
6. Press the zoom key again to return to a full picture and leave the zoom mode.
   > The zoom indicator no longer lights.
7. Press the ALT key ALT to return the keys to normal operation.
   > The ALT indicator no longer lights.

# Live, playback and search modes

## Live mode

The live mode is the normal operating mode of the unit where you watch live pictures from the cameras. From the live mode you can switch to the search mode, the playback mode or to the system menu.

Access to search and playback functions may require a password. Discuss this with your administrator.

Press the search key **Search** to switch to the search mode. The search menu opens.

To enter the playback mode use one of the following keys:

- Press the rewind key ◀◀ to start reverse playback of recordings for the displayed cameras.
- Press the forward key ▶▶ to start playback from one minute earlier.
- Press the play key ▶ to resume playback from the last selected playback position.

Press the live key **Live** to switch back to live viewing. An alarm also switches the unit back to live viewing.

## Playback mode

In playback mode the video control keys operate as follows:

- Press the rewind key ◀◀ to start reverse play of recordings. Pressing it again and again increases the display rate to a maximum and then back to normal speed again. Press the rewind key ◀◀ in the pause mode to step back one field at a time.
- Press the pause key ❚❚ to freeze the picture.
- Press the forward key ▶▶ to start forward playback of recordings. Pressing it again and again increases the display rate to a maximum and then back to normal speed again. Press the forward key ▶▶ in the pause mode to step forward one field at a time.
- Press the play key ▶ to resume playback.
- Press the current camera key to switch the ATM/POS display on and off.

Press the live key **Live** to switch back to live viewing or press the search key **Search** to switch to the search mode. In both cases, playback stops.

## Protecting or archiving a video recording

1. Press the pause key ⏸ for longer than one second during playback to mark the beginning of a video segment for protection or archiving.
   > A dialog window appears.
   > The time and date of the marker at which the video segment starts is shown.
2. Press the select key ↵ to continue playing the video you wish to protect or archive.
3. During playback, press the pause key ⏸ for longer than one second again to mark the end of the video segment.
   > A dialog window appears.
   > The date and time of the beginning and end markers of the video segment is shown.
4. Select **Protect** to protect the marked video from deletion. Select **Archive** to write the marked video segment to a (re)writable disk. Select **Protect & Archive** to do both.

The software required to play a video segment on a PC (the Archive Player) is copied to the disk when a local archive is made. To ensure that this software is present in the Divar, use the supplied CD-ROM to load the latest version of the Archive Player into the Divar.

# Search mode

Press the search key Search to open the search menu. Use the search menu to search for stored video recordings.

| PLAYBACK SEARCH | |
|---|---|
| SEARCH EVENT FILTER | ALARM/MOTION |
| CAMERA | ALL |
| START TIME | 2002-03-14 13:00 |
| END TIME | 2002-03-14 14:00 |
| SEARCH DIRECTION | FORWARD |
| START SEARCH | > |
| DISK CONTENTS | |
| EARLIEST TIME | 2002-03-14 14:00 |
| LATEST TIME | 2002-06-19 20:23 |
| | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 |
| FILTER | ☑ ☑ ☑ ☑ ☑ ☑ ☑ ☑ ☑ ☑ ☑ ☑ ☑ ☑ ☑ ☑ |

>> SEARCH CRITERIA

- Set the **Event filter** to search for only alarm events, only motion events or both.
- Set to **None** so that the search is not restricted by events.
- Set to **Smart Motion Seach** to search for motion in a designated area of a particular camera picture.
- Set to **ATM/POS** to search for transactions based on the text string you enter.
- Specify the cameras to search for. The selected cameras are shown at the bottom of the menu with a check mark. Press a camera key to change the selection. If **Smart Motion Seach** is selected, only a single camera can be selected.
- Select **Forward** to search from start time to end time or **Backward** to search from end time to start time.

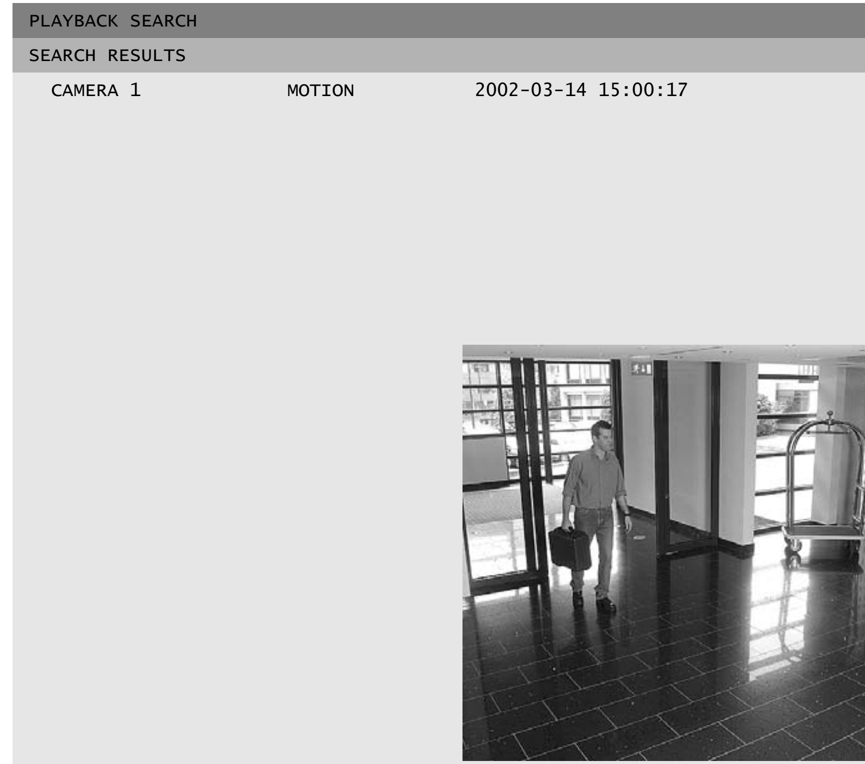
- Fill in a time and date from which to start the search.
- Fill in an end time and date to limit the time span of the search.
- If ATM/POS is selected, fill in the text string (16 characters maximum) you wish to search for. The text string is case insensitive.
- Select **Start Search** (or press F2) to initiate the search procedure.

- If **Smart Motion Search** is selected, you must set the motion sensitivity and select an area before the search procedure is initiated.
- Use the arrow keys to adjust the **Motion Sensitivity**. The higher the value, the higher the sensitivity.
- Select **Motion Area** to define the picture area that is to be examined for motion.
- Use the arrow keys to move around the grid. Press F1 to insert a motion detection area. Use the arrow keys to enlarge it.
- Press F1 again to save the area. Press the escape key to cancel and return to grid square selection.
- Press the select key to leave the grid. F2 clears all motion detection areas.
- Select **Start Search** (or press F2) to initiate the search procedure.

- Press the escape key ESC to exit the search mode and return to the previous mode.

>> SEARCH RESULTS

- The recording fitting the filter and closest to the selected date and time is shown first.
- Use the up/down arrow keys to move through a long list. The selected recording is shown.
- Press the select key ↵ for a full-screen playback of the selected recording.
- Press the search key Search during playback to return to the list.
- Press the escape key ESC to return to the filter menu.



# Using the menu

## Accessing the menu

The menu gives access to several functions to help you use the unit. Access to some menu items is password protected.

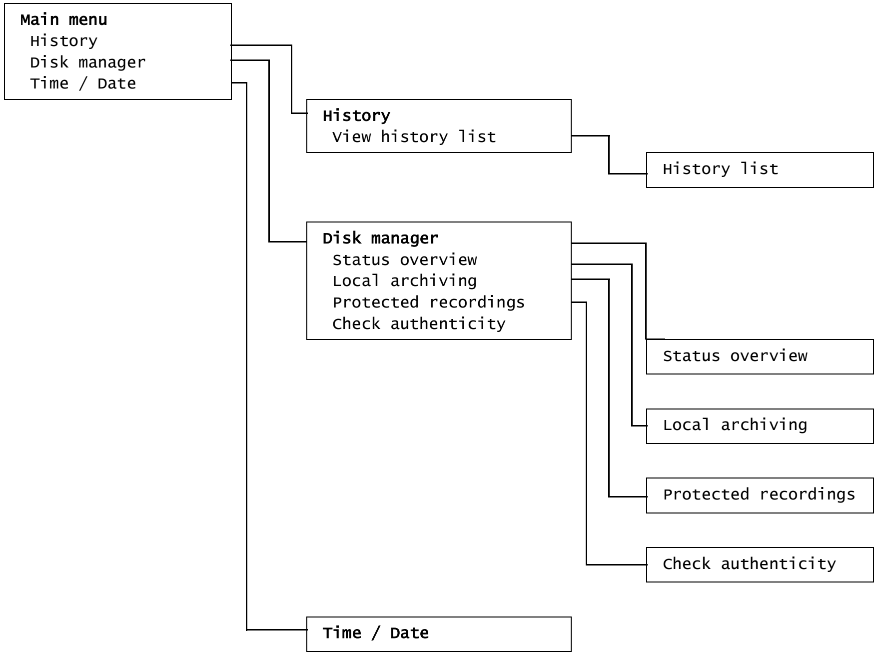
To open the menu:

1. Press the ALT key ALT to enter the alternate function mode.
   > The ALT indicator lights.
2. Press the menu key.
   > The main menu appears full-screen on monitor A.

## Navigating

- Use the arrow keys to move through a menu or list.
- Use the select key ↵ to select a submenu or item.
- Use the escape key ESC to go back.

## Menu structure



## History >

The history menu provides a list of all events that have occurred. This list can be filtered to show only those events you wish to see.

### >> HISTORY FILTER

- Fill in the date/time values to restrict the period for viewing events.
- Select **No** for those events that you do not wish to see.

| | |
|---|---|
| MAIN MENU | |
| HISTORY | |
| VIEW HISTORY LIST | > |
| BEGIN TIME | 2002-03-14 13:00 |
| END TIME | 2002-06-19 20:23 |
| | |
| SHOW | |
| ALARMS | YES |
| MOTIONS | YES |
| NETWORK CONNECTIVITY | YES |
| ERRORS | YES |
| | |
| EARLIEST TIME | 2002-03-14 13:00 |
| LATEST TIME | 2002-06-19 20:23 |

### >> HISTORY LIST

- The latest event is shown first.
- Use the right/left arrow keys to move through a long history list.
- If a date or time has been changed, the original values are also displayed.
- Alarm, motion and video loss events are stored for a maximum of one month.

| | |
|---|---|
| MAIN MENU | |
| HISTORY | |
| VIEW HISTORY LIST | |
| TIME | EVENT |
| 2002-03-15 13:00:17 | VIDEOLOSS |

## DISK MANAGER >

The disk manager menu gives access to information on the internal hard disk(s) and any external disks connected. The status of the recorded video and associated data is also accessed via this menu. Archiving is accessed via this menu. Access to some menus may be password protected.

| MAIN MENU | |
|---|---|
| DISK MANAGER | |
| STATUS OVERVIEW | > |
| LOCAL ARCHIVING | > |
| PROTECTED RECORDINGS | > |
| AUTHENTICITY CHECK | > |

### >> STATUS OVERVIEW

- **Disk capacity** shows the total space available in Gigabytes.
- **Used space** shows the total space used by all video recordings including protected recordings.
- **Protect rec usage** shows the space used by protected recordings that cannot be overwritten.
- The displayed **Recording time left** value depends on the recording options that are set, and alarm and motion frequency. The maximum recording time shown depends on the available storage capacity and recording setup.

| MAIN MENU | |
|---|---|
| DISK MANAGER | |
| STATUS OVERVIEW | |
| EARLIEST RECORDING | 2002-03-14 13:00:17 |
| LATEST RECORDING | 2002-06-19 20:23:45 |
| DISK CAPACITY | 50 GB |
| USED SPACE | 30 GB |
| PROTECT REC USAGE | 20% |
| RECORDING TIME LEFT | 3 DAYS |

### >> LOCAL ARCHIVING

Segments of recorded video can be written to (re)writable disks using the local archiving menu.

- Select **Archive Setup** to check the status of the writer, the progress of the writing, or to erase or format rewritable disks.
- Select **Archive Session** to make a list of the video segments to be archived and to start writing.

| MAIN MENU | |
|---|---|
| DISK MANAGER | |
| LOCAL ARCHIVING | |
| ARCHIVE SETUP | > |
| ARCHIVE SESSION | > |

#### >>> ARCHIVE SETUP

- Progress is shown as a percentage of the current activity.
- Select **Cancel Archiving** (or press F2) to stop the current archive session (this can result in an unusable disk).
- Set **Finalize** to **Yes** if the disk is to be finalized after archiving.
- Select **Erase Rewritable** to remove all data from a rewritable disk.
- Free Space shows the free space available on the inserted disk.

#### >>> ARCHIVE SESSION

- Select **View Archive List** to review the selected video segments and to start the archiving procedure.
- Fill in a begin and end, date and time for the video segment you wish to archive.
- Select **Add to Archive List** (or press F2) to place it in the list. All recorded cameras in the time span are selected.
- To remove a video segment from the list, select it with the arrow keys and press F2.
- The archive list is saved until archiving is carried out. Video segments that have been partially overwritten or deleted are removed from the list.
- Select **Start Archiving** to write the video segments to disk.
- If the total size is greater than the disk capacity, then only the first segments that fit are archived. Those segments that are not archived remain in the list so that they can be archived to a new disk.

- Fill in a begin and end, date and time for the video segment you wish to archive. Select **Add to Archive List** (or press F2) to place it in the list. All recorded cameras in the time span are selected.
- Select **Start Archiving** to write the video segments to disk.
- Set **Finalize** to **Yes** if the disk is to be finalized after archiving.
- If a disk is not finalized it can be used for multiple sessions. If finalized, older CD players can read it but new sessions cannot be added anymore.

## >> PROTECTED RECORDINGS

(access may require password)

- Move to a protected recording in the list and press the select key ↵ to play it back.
- Press the escape key ESC to stop playback and return to the list.
- Auto-protected recordings are indicated by a **!** after the entry in the list.

To remove the protection of a recording, move to it in the list and press F2. You must fill in a password (if configured) and confirm before the recording is unprotected.

- Select **Add to Archive List** (or press F1) to place a protected recoding in the archive list.
- Recordings to be archived are indicated by an **A**.

| MAIN MENU | |
|---|---|
| DISK MANAGER | |
| PROTECTED RECORDINGS | |
| BEGIN TIME | END TIME |
| 2002-03-14 13:00:17 | 2002-03-14 14:30:17 |

## >> AUTHENTICITY CHECK

(access may require password)

- This check verifies that video images and associated data have not been modified.
- Select the period within which the authenticity check runs. The default values are the same as the earliest and latest available recording times.
- Press the escape key ESC to cancel the check.
- During the check all other front panel keys are disabled.

If the result is **Not OK**, the date and time of the tampered video is displayed.

| MAIN MENU | | |
|---|---|---|
| DISK MANAGER | | |
| AUTHENTICITY CHECK | | |
| BEGIN TIME | 2002-03-14 13:00:17 | |
| END TIME | 2002-03-14 13:00:17 | |
| START CHECK | | > |
| | | |
| PROGRESS | 85% | |
| RESULT | NOT OK | |
| | | |
| DISK CONTENTS | | |
| EARLIEST TIME | 2002-03-14 13:00:17 | |
| LATEST TIME | 2002-03-14 13:00:17 | |

## TIME/DATE >

- Select a time zone from the list.
- Fill in the actual time and date.
- Select either a 12-hour or a 24-hour clock format.
- Select from three date formats which show either the month (MM), the day (DD) or the year (YYYY) first.
- Set **Daylight Saving** to **Yes** to enable it. Fill in the day, month and time of both change-overs and the offset if it differs from the information associated with your time zone.

| MAIN MENU | | |
|---|---|---|
| TIME/DATE | | |
| TIME ZONE | GMT | +01:00 WEST-EUROPE |
| TIME FORMAT | | 24 HOUR |
| TIME | | 14:00:17 |
| DATE FORMAT | | YYYY-MM-DD |
| DATE | | 2002-06-19 |
| SYNCHRONIZE | | > |
| | | |
| DAYLIGHT SAVING | | YES |
| START DATE/TIME | | LAST SUN MAR 02:00 |
| END DATE/TIME | | LAST SUN SEP 03:00 |
| OFFSET | | 01:00 |

### >> SYNCHRONIZE

- Use the **Synchronize** function to set the time of the unit from the time of the network. (Synchronize only works if the Divar time is within 7½ minutes of the server time.) Fill in the IP address of the network time server.
- The time and date of all other connected units are automatically synchronized every hour from the time and date of the unit with DVR ID 1.

# Triggers and alarms

Various types of events can change the way the unit works. These events can be:

- An alarm input signal applied to the unit.
- A motion detection signal from a camera.
- A loss of video from one of the cameras.
- An internal alert from the unit itself.

The way the unit reacts to events depends on how it has been programmed.

An event causes either a trigger or an alarm. A trigger can change the way the unit works but does not require a response from the user. An alarm can also change the way the unit works but, in addition, it usually activates several indicators and requires that the user acknowledges the alarm situation.

The unit can react to an event in any one of the following ways:

### Alarms

- A beeper sounds
- A status message is displayed
- An alarm icon is displayed
- The border around a cameo can change color
- An alarm indicator , , or flashes
- The ACK indicator flashes
- An output relay is activated

### Alarms and Triggers

- The view modes on the monitors change
- A controllable camera is moved to a pre-defined position.
- Recording speed changes
- The unit changes the way it operates via pre-defined profiles.

## Background events

Triggers and alarms can change background tasks that you, as user, may not even notice. Unit responses that are not visible to the user are, for example, a change in recording speed, the activation of the output relay and event logging. The unit can also be configured to record and automatically protect video clips upon the activation of an alarm input. A trigger may change the way the camera images are displayed on the monitors without requiring your intervention.

## Alarm inputs

### If an input causes an alarm

- Monitors A and B can switch to a pre-programmed view mode.
- Monitor A: The border around the displayed cameo is red. The alarm icon is displayed in each cameo. An alarm status message is displayed.
- Monitor B: Sequenced display of pre-programmed cameras.
- The alarm beeper sounds. The alarm and the ACK indicators flash.
- A controllable camera might be moved to a pre-defined position.

#### Acknowledging an input alarm

1. Press the acknowledge key ACK to acknowledge the alarm.
   > The beeper is silent.
   > The alarm and ACK indicators are no longer lit.
   > The alarm status message disappears.
   > The last-used view mode is restored.

The alarm icon remains visible as long as the input causing the alarm is active.

If an alarm is not acknowledged, the beeper switches off after the dwell time but the alarm still needs to be acknowledged.

If auto-acknowledge is enabled, the beeper, and the alarm and ACK indicators switch off after the dwell time.

## Motion alarm

### If a motion detection signal causes an alarm

- Monitors A and B can switch to a pre-programmed view mode.
- Monitor A: The border around the camera generating the motion signal is yellow. The motion icon is displayed in the cameo. An alarm status message is displayed.
- Monitor B: Sequenced display of pre-programmed cameras.
- The alarm beeper sounds. The motion and the ACK indicators flash.
- A controllable camera might be moved to a pre-defined position.

#### Acknowledging a motion alarm

1. Press the acknowledge key ACK to acknowledge the alarm.
   > The beeper is silent.
   > The motion and ACK indicators are no longer lit.
   > The alarm status message disappears.
   > The last-used view mode is restored.

The motion icon remains visible as long as the input causing the alarm is active.

If an alarm is not acknowledged, the beeper switches off after the dwell time but the alarm still needs to be acknowledged.

If auto-acknowledge is enabled, the beeper, and the motion and ACK indicators switch off after the dwell time.

Using motion detection outdoors may cause false alarms because of varying light conditions.

## Video loss alarm

### If the loss of a video signal causes an alarm:

Monitor A or B can be set up to show the video loss signal.

- Monitor A switches to multiscreen view. The lost camera signal is displayed as a black cameo with the video loss message. The border around the camera with the video loss is red. An alarm status message is displayed.
- Monitor B: Sequenced display of cameras that do not have video loss.
- The alarm beeper sounds.
- The video loss and the ACK indicators flash.

#### Acknowledging a video loss alarm

1. Press the acknowledge key ACK to acknowledge a video loss alarm.
   > The beeper is silent.
   > The video loss and ACK indicators are no longer lit.
   > The alarm status message disappears.
   > The last-used view mode is restored.

If the camera with video loss is visible, the black cameo and the video loss message continue to be displayed as long as there is no video present.

If an alarm is not acknowledged, the beeper switches off after the dwell time but the alarm still needs to be acknowledged.

If auto-acknowledge is enabled, the beeper, and the video loss and ACK indicators switch off after the dwell time.

## Multiple alarms

Monitor A switches to multiscreen view if more than one alarm occurs. The latest alarm status message is always shown. Pressing the acknowledge key ACK deactivates all alarms.

# Viewing live and playback video via a web browser

Open your web browser and enter the network IP address (for example, http://192.168.1.2) of the Divar you wish to connect to. This must be the same IP address as set in the System settings/Connectivity/Network setup menu of the Divar.

## Browser settings

Internet Explorer version 6.0 works best; you must have at least version 5.0. It may be necessary to change the security setting of the browser so that it can run ActiveX controls from the Divar. To do this proceed as follows:

1. On the **Tools** menu of your browser, select **Internet Options**.
2. Click the **Security** tab.

If the Divars you wish to control are connected via a local intranet:

3. Click **Local intranet** to select the zone
4. Click the **Custom Level**… button to access the Security Settings dialog box.
5. Ensure that each of the five settings under **ActiveX controls and plug-ins** is set to **Prompt** or **Enable**.

An alternative method is to specify the IP address of each Divar:

3. Click **Trusted sites**.
4. Click the **Sites**… button.
5. In the top box, type the IP address of the Divar (http://xxx.xxx.xxx.xxx).
6. Ensure that **Require server verification (https:) for all sites in this zone** is unchecked.
7. Click the **Add** button.
8. Click the **OK** button.
9. Click the **Custom Level**… button to access the Security Settings dialog box.
10. Ensure that each of the five settings under **ActiveX controls and plug-ins** is set to **Prompt** or **Enable**.

## How to Log in

When you connect to the Divar, the **Login** page appears. (Click **Cancel** to discontinue login and exit the application.)




To log in:

1. Type your user name and password.
   > The user name and password to be filled-in are set in the System settings/Connectivity/Network access menu of the Divar itself. Check with your administrator if you do not have access to the unit.
   > To let the system remember your name and password on subsequent use, place a check mark in the **Save login information** box. Administrator passwords are not saved.
2. Select a language from a drop-down menu.
3. Click **Login**.

## Live page

The live video page is shown when you log in. In this page you can:

- view live video
- assign cameras to cameos
- select different multiscreen displays
- sequence views
- take snapshots
- control cameras




The left side of the live video page has four buttons that are always available.

### Live button

Click the **Live** button to return to live viewing from the playback mode.

### Playback button

The playback page is shown when you click **Playback**. In the playback page you can search for recordings based on events or motion and play them back.

### Help button

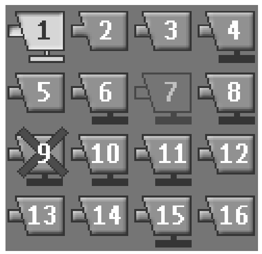
Click **Help** at any time to get help on any topic. A pop-up help page appears.

### Logout button

To disconnect from the connected unit, click **Logout**. The login page appears. Now you can choose to connect to a different unit or to exit the program completely by clicking **Cancel**.

## Understanding the camera icons

Camera icons are shown in the top right of the screen both in live and playback modes.




The camera icons show the number of the camera connection. The status and type of camera is indicated by the type of icon used.

| | | |
|---|---|---|
| Camera selected | - | Indicates the active camera (yellow icon). |
| Camera not selected | - | Shows camera is available for selection. |
| Controllable camera | - | The connected camera has pan/tilt/zoom (PTZ), pre-position or Aux. controls. |
| Camera not available | - | The camera is not physically connected or a user is blocked from using this camera by the administrator. |
| Video Loss | - | There is no video signal from a camera. |

## Assigning cameras to cameos

A cameo is a single camera picture in a multiscreen display. A camera picture can only be shown in one cameo at a time.

To assign a camera to a cameo:

1. Click one of the camera view icons to select a multiscreen view.
2. Click on the cameo where you want that camera picture to be shown.
   > A yelow border appears around the cameo.
3. Click on a camera or open the drop-down menu 1 CAMERA 1 and select a camera.
   > The camera picture appears in the cameo.

An alarm flashes in the cameo when an alarm occurs. A motion alarm flashes in the cameo when motion is detected.

## Camera views

To switch the display mode:

1. Click one of camera view icons to change the cameo display configuration.
   > Single, Quad, 3x3 and 4x4 multi-image display modes are available.
2. Alternatively, to view a camera in single mode, open the drop-down menu 1 CAMERA 1 and select a camera.

To select the sequence mode:

Click the sequence icon to start sequencing through a list of cameras.

To freeze the video stream

1. Click the freeze icon.
   > All displayed cameos are paused
2. Click the icon again to return to live viewing.

### Multiple quad views

Four quad views are available. The current quad view is indicated by a number in the quad icon. Each quad view can have unique camera-to-cameo assignments. To manually cycle through the available views, click the quad icon.

## Capturing a still image

You can capture still images from the fullscreen display of a camera and save them to the PC hard disk in a bitmap format.

To save an image from the active cameo to the PC hard disk:

1. Click the single icon to view the images from one camera.
2. Click the snapshot icon.
   > The Snapshot pop-up page appears.
3. To change the default location, type the location in the PC file system where you want to store the image file.
4. To change the file name, type a new name for the file.
5. Click **Save**.

The snapshot has a resolution of 720x484 pixels in NTSC and 720x576 pixels in PAL. Authentication information is shown under the image.

## Controlling cameras

A user can control controllable cameras by using the mouse on the cameo of the camera or by using the icons displayed under Camera Controls.

### Using the mouse to pan and tilt

1. Click the cameo of the camera you want to control to make it active.
   > It must be a controllable camera.
2. Place the cursor on the active cameo (not in the center).
   > The cursor arrow indicates the direction in which the camera will move.
3. Click and hold the left mouse button.
   > The camera moves in the direction indicated.
   > Release the button when the camera is positioned.
4. Alternatively, drag the cursor in the direction you wish to move the camera.
   > Move the cursor horizontally to pan the camera and vertically to tilt the camera.

Pan and tilt speed depends on the position of the cursor on the cameo. The closer to the edge of the cameo you click, the slower the speed; the closer to the center, the faster the speed.

### Using the mouse to zoom in or out

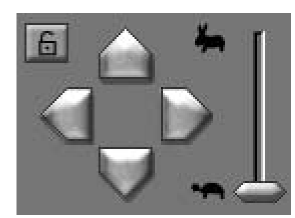
1. To zoom in, place the cursor slightly above the center of the active cameo.
   > The cursor changes to a magnifying glass with a plus sign.
2. Click the left mouse button to zoom in.
3. To zoom out, place the cursor slightly below the center of the active cameo.
   > The cursor changes to a magnifying glass with a minus sign.
4. Click the left mouse button to zoom out.

Zoom speed also depends on the position of the cursor with respect to the center of the cameo.

An alternative method of zooming in and out is to use the scroll wheel of your mouse.

### Pan and tilt

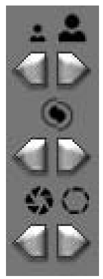
1. Select the cameo of the camera you want to control.
2. Click and hold the up and down arrows for tilt.
3. Click and hold the left and right arrows to pan.
4. Click the lock-out icon to request exclusive control for PTZ, pre-position and aux commands of the active camera.
5. Click the lock-out icon again or select another active camera to unlock it.
   > When a user with higher priority requests exclusive privileges, the lower priority user loses control of the locked-out camera.



## PTZ speed

Drag or click the slider to adjust the speed of the PTZ controls.
> There are eight discrete speed levels.

## Zoom, Focus, and Iris



1. Select the cameo of the camera you want to control.
2. Click the left zoom button to zoom out; click the right zoom button to zoom in.
3. Click the left focus button for far focus; click the right focus button for near focus.
4. Click the left iris button to close the iris; click the right iris button to open the iris.

## Moving a camera to a pre-position

To move the active camera to a pre-position:

1. Enter a pre-position number.
2. Click Shot.



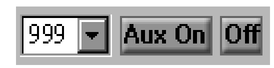

Click buttons one to five for immediate positioning to one of the first five pre-positions.

To store the current position of the camera in a pre-position:

1. Enter a pre-position number.
2. Click Set.

## Aux functions

Aux commands are special commands for controlling AutoDome™ cameras.

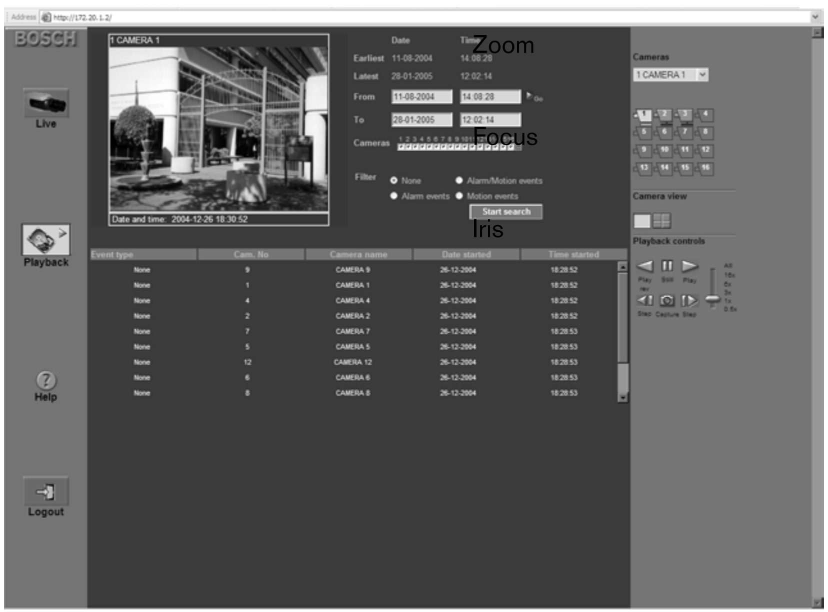



To switch on the Aux command:

1. Enter an Aux number
2. Click Aux On.
3. To switch off the Aux command, click Off.

## The playback viewing page

The playback page is shown when you click **Playback** .




### Selecting single or multiscreen views

In a normal sized playback page:

1. Click the single icon to view the images from one camera.
2. Click the quad icon to view the images of four cameras.
   > The 3x3 and 4x4 modes are not available.

The information line at the bottom of a normal-sized playback page shows the date and time of the playback video.

## Using the playback controls

### Play

Click **Play** to play forward streaming video in the playback page.

> The playback speed depends on the setting of the speed slider.
> Some frames may be dropped depending on the bandwidth of the connection and the playback speed.

### Play Reverse

Click **Play rev** to play streaming video in reverse in the playback page.

> The playback speed depends on the setting of the speed slider.
> Some frames may be dropped depending on the bandwidth of the connection and the playback speed.

### Playback Speed

The slider controls the speed of the continuous reverse and continuous forward play. The **All** value means that no images are dropped at the fastest rate provided by the system.

### Still

Click **Still** to freeze the image.

> The last streamed image is shown as a still in the playback page.
> To see authenticity information about the current still image, click the information icon in the cameo.

### Step forward

The step icon is only enabled in the still mode.

1. Click **Step** forward to advance the image one frame.
2. Hold it down to continue stepping.

### Step backward

The step icon is only enabled in the still mode.

1. Click **Step** backward to move the image one frame back in time.
2. Hold it down to continue stepping.

## Capturing a still image

You can capture still images from the fullscreen display of a camera and save them to the PC hard disk in a bitmap format.

To save an image from the active cameo to the PC hard disk:

1. Click the single icon to view the images from one camera.
2. Click the snapshot icon .
   > The Snapshot pop-up page appears.
3. To change the default location, type the location in the PC file system where you want to store the image file.
4. To change the file name, type a new name for the file.
5. Click **Save**.

The snapshot has a resolution of 720x484 pixels in NTSC and 720x576 pixels in PAL. Authentication information is shown under the image.

## Search

In the playback page you can set up a search filter for events. You can select recorded video for playback from the search results list.

### Searching by event

#### Earliest and latest recording times

- The **Earliest** box indicates the date and time of the oldest recording on disk.
- The **Latest** box indicates the date and time of the most recent recording on disk.

#### Setting the search period

1. Enter the date and time in the **From** and **To** boxes to define the period you want to search.
   > The **To** box shows the time and date of the latest recording and the **From** box the earliest recording by default.
2. Click the **Go To** control next to the **From** box to start playback at the time and date entered.

#### Camera selection

Click in a camera selection box to place a check mark under those cameras you want to include in the search. Click to select all or none.

### Event filter

Specify the type of event that you wish to search for:

**None**: All recorded video for the selected cameras is searched for within the defined period (including alarm and motion events).

**Alarm events**: All recorded alarm video for the selected cameras is searched for within the defined period.

**Alarm and motion events**: All recorded alarm and motion alarm video for the selected cameras is searched for within the defined period.

**Motion events**: All recorded motion alarm video for the selected cameras is searched for within the defined period.

### Start search

Click **Start search** to start the search.

### Search results

When the search is completed, a list of video clips that fulfill the filter criteria is displayed. This list shows the most recent event recordings at the top, the oldest at the bottom.

1. Use the scroll bar to examine the full list.
2. Click on an entry in the list to select it.
   > Playback of the selected item starts in the playback page.
3. Use the playback controls to start the playback of the selection.

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